IN THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A method to verify connectivity between an optical transceiver and a wavelength switch module (WSM), the method comprising:

sending a first optical signal from the optical transceiver to the WSM;

checking a second optical signal received by the optical transceiver after sending the first optical signal;

determining whether the second optical signal corresponds to the first optical signal; and

the optical transceiver putting an identification into the first optical signal to send with the first optical signal to the WSM to allow a processor communicably coupled to the WSM to determine if the second optical signal corresponds to the first optical signal.

2. (Original) The method of claim 1, wherein determining whether the second optical signal corresponds to the first optical signal comprises:

varying power of the first optical signal before the first optical signal exits the WSM; and

measuring the second optical signal to determine whether power of the second optical signal changes in response to the varying of the power of the first optical signal.

3. (Previously Presented) The method of claim 1, wherein the optical transceiver determines whether the second optical signal corresponds to the first optical signal by checking whether the second optical signal includes the identification.

4. (Original) The method of claim 3, further comprising sending an error message if the second optical signal does not include the identification.

5. (Original) The method of claim 1, wherein the first optical signal enters the WSM at an input port of the WSM, passes through a channel of the WSM, and exits through an output port of the WSM, the output port being coupled to the input port via the channel and having a one-to-one correspondence with the input port.

6. (Original) The method of claim 5, further comprising:

causing a processor to look up a wavelength designated to the channel; and

checking whether the optical transceiver is at the wavelength designated to the channel.

7. (Original) The method of claim 6, further comprising tuning a light source of the optical transceiver to the wavelength designated to the channel if the optical transceiver is not at the wavelength designated to the channel.

8. (Original) The method of claim 6, wherein causing the processor to look up the wavelength comprises sending an interrupt to the processor upon detection of the first optical signal at the input port of the WSM.

9. (Previously Presented) A machine-accessible medium that provides instructions that, if executed by a processor, will cause the processor to perform operations comprising:

receiving an interrupt from a wavelength switch module; and

in response to the interrupt,

identifying the wavelength switch module, and

identifying an input port of the WSM that receives a first optical signal from an optical transceiver.

10. (Original) The machine-accessible medium of claim 9, wherein the operations further comprise:

determining whether the optical transceiver has received a second optical signal after sending the first optical signal; and

identifying a wavelength designated to a channel in the WSM corresponding to the input port.

11. (Original) The machine-accessible medium of claim 10, wherein the operations further comprise:

tuning a light source of the optical transceiver to the designated wavelength if the light source is not at the designated wavelength.

12. (Original) The machine-accessible medium of claim 10, wherein the operations further comprise:

sending an error message if the light source is not at the designated wavelength.

13. (Previously Presented) An apparatus comprising:

a wavelength switch module (WSM);

an optical transceiver, detachably coupled to the WSM, to send a first optical signal to the WSM and to detect a second optical signal received from the WSM after sending the first optical signal, wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM; and

a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver.

14. (Original) The apparatus of claim 13, wherein the WSM includes a variable optical attenuator to vary power of the first optical signal before the first optical signal exits the WSM and the optical transceiver includes a light detector to measure power of the second optical signal to determine whether the power of the second optical signal changes in response to the first optical signal.

15. (Previously Presented) The apparatus of claim 13, wherein the optical transceiver includes a decoder to check whether the second optical signal includes the identification.

16. (Original) The apparatus of claim 13, wherein the WSM includes:

an input port;

an output port having a one-to-one correspondence with the input port; and

a channel coupling the input port to the output port, wherein the first optical signal enters the WSM at the input port, passes through the channel, and exits through the output port.

17. (Original) The apparatus of claim 16, wherein the optical transceiver comprises a light source, which is tunable to a wavelength designated to the channel.

18. (Previously Presented) A system comprising:

an optical network including a plurality of optical fibers; and

a first optical network node, coupled to the optical network, the first optical network node comprising:

a wavelength switch module (WSM);

an optical transceiver, detachably coupled to the WSM, to send a first optical signal to the WSM and to detect a second optical signal received from the WSM after sending the first optical signal, wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM; and

a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver.

19. (Original) The system of claim 18, wherein the WSM includes a variable optical attenuator to vary power of the first optical signal before the first optical signal exits the WSM and the optical transceiver includes a light detector to measure power of the second optical signal to determine whether the power of the second optical signal changes in response to the first optical signal.

20. (Previously Presented) The system of claim 18, wherein the optical transceiver includes a decoder to check whether the second optical signal includes the identification.

21. (Original) The system of claim 18, wherein the WSM includes:

an input port;

an output port having a one-to-one correspondence with the input port; and

a channel coupling the input port to the output port, wherein the first optical signal enters the WSM at the input port, passes through the channel, and exits through the output port.

22. (Original) The system of claim 21, wherein the optical transceiver comprises a light source, which is tunable to a wavelength designated to the channel.

23. (Previously Presented) A method comprising:

sending a first optical signal from an optical transceiver to an input port of a wavelength switch module (WSM), wherein the first optical signal passes through the WSM via a channel within the WSM;

in response to the WSM receiving the first optical signal, causing a processor to look up a wavelength designated to the channel; and

checking whether the optical transceiver is at the wavelength designated to the channel.

24. (Original) The method of claim 23, further comprising tuning a light source of the optical transceiver to the wavelength designated to the channel if the optical transceiver is not at the wavelength designated to the channel.

25. (Original) The method of claim 23, wherein causing the processor to look up the wavelength comprises sending an interrupt to the processor upon detection of the first optical signal at the input port of the WSM.

26. (Previously Presented) A method for commissioning in an optical network node comprising:

transmitting an optical signal of a given wavelength from an optical transceiver that is in the optical network node, wherein a laser of said optical transceiver is connected to one of a plurality of add ports on one of a plurality of wavelength switch modules (WSMs) in said optical network node, wherein a light receiver of said optical transceiver is connected to a

corresponding one of a plurality of drop ports on the one of the plurality of WSMs, wherein at least some of said plurality of WSMs handle different wavelengths than others and wavelengths handled by each of said plurality of WSMs are tracked in configuration information of a corresponding WSM, and wherein a default configuration for the plurality of WSMs is to pass through a received optical signal from add port to corresponding drop port;

detecting the optical signal in the one of the plurality of WSMs;

based on said detecting of the optical signal, determining the wavelength handled by the one of the plurality of WSMs from the configuration information;

detecting the optical signal at the optical transceiver;

correlating said detectings to determine that the optical transceiver is connected to the one of the plurality of WSMs; and

determining if the wavelength of the optical signal matches the wavelength handled by the one of the plurality of WSMs.